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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,329	07/13/2007	Yasushi Miyajima	290788US8PCT	1876

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EXAMINER	
RAJAN, KAI	

ART UNIT	PAPER NUMBER
3769	

NOTIFICATION DATE	DELIVERY MODE
06/03/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/579,329	MIYAJIMA ET AL.	
	Examiner	Art Unit	
	Kai Rajan	3769	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 March 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 – 3, 5, 6, 8 – 16, 19 – 31, 33 – 40, and 42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 – 3, 5, 6, 8 – 16, 19 – 31, 33 – 40, and 42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The Examiner acknowledges the amendment filed March 24, 2010.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 24, 2010 has been entered.

Response to Arguments

Applicant's arguments have been considered but are not persuasive. Applicant contends that Engstrom, Mault, and Arai fail to disclose ". . . 1) bioindex detecting means for detecting a pulse wave; 2) the bioindex detecting means located at a rear facing portion; . . . [and] 3) the front facing portion including a display screen (emphasis added)." The Examiner respectfully disagrees. The Examiner has added additional citations to the references with a detailed interpretation (see below), and will specifically point out the three contended elements here.

Regarding item 1), Engstrom discloses a personal digital assistant with sensors disposed along the sides of the device, and further states the configuration of sensors may vary (Engstrom column 2 lines 51 – 67, column 3 lines 1 – 16). The sensors measure blood flow rates which is processed to determine heart rate, which are a form of pulse rate measurement. Therefore, Engstrom discloses sensors (bioindex detecting means) detecting pulse waves.

Regarding item 2), Engstrom states the configuration of sensors on the personal digital assistant may change depending on how the device is handled (Engstrom column 3 lines 1 – 16). Furthermore, the Examiner has additionally stated that the placement of the pulse wave sensor on the rear face of the device is a design choice, and nonessential to the functionality of the invention. Applicant also has not stated specific reasons or advantages for placing the pulse wave sensor on the rear cover (see rejection below). Therefore, since Engstrom teaches different sensor configurations and there is no necessity for the particular sensor placement claimed, the applied prior art is sufficient to reject the limitation. Arai is relied upon to add a cover over the blood flow rate sensor to block external light from interfering with the photosensitive sensor (Arai et al. column 2 lines 51 – 55).

Finally regarding item 3), the personal digital assistant comprises a display on one face of the device, designated the front face for purposes of this interpretation (Engstrom figure 2 item 202).

In light of the foregoing reasons and the rejection presented below, the applied prior art is sufficient to reject the claims as currently presented.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 – 3, 5, 6, 8 – 16, 19 – 31, 33 – 40, and 42 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In particular, independent claims 1, 20, and 26 recite a "portable device for controlling electronic equipment" in the preamble, and further define that equipment as "personal computer, a television, image receiver, a video and/or audio signal recording and/or reproducing device, and an air conditioner" within the claim body. Furthermore, the independent claims recite the portable device performing a "mobile telephone communication." However, in the specification the mobile telephone and "remote controller" embodiments are separate, and there is no disclosure of using a portable device the performs a mobile telephone communication controlling electronic equipment. As such, the claims recite a combination of embodiments that was not present in the original written description and not enabled by the written description.

Furthermore, independent claims 1, 20, and 26 disclose a "bioindex detecting means for detecting a pulse wave . . . at a rear facing portion." Dependent claims (such as 2 and 3) further disclose the bioindex detecting means detecting at least Galvanic Skin Reflex, Galvanic Skin Response, SPO2, sweating, and myoelectric potentials. However, the written description only describes measuring these parameters with sensors disposed on the sides or front of the mobile device, referring to the first and second sensors on the "first side" and "second side" of the casing in the independent claims. The "bioindex detecting means" located on the rear face of the device is only described in the written disclosure as detecting pulse wave. Similarly, the "finger tip detection means" of claim 6 is described in pages 18 and 19 of the specification as comprising sensors on the faces of the device other than the rear face where the finger tip insertion portion is

located. Therefore, the bioindex detecting means location and claimed sensor types in the claims must be amended to conform to the written disclosure.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 – 3, 5, 6, 8 – 16, 19 – 31, 33 – 40, and 42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In particular, the independent claims 1, 20, and 26 disclose a "bioindex detecting means for detecting a pulse wave . . . located at a rear facing portion" *and* "the rear facing portion of the body including a detecting portion. . ." It appears that the "bioindex detecting means" and the "detecting portion" are the same element, yet are disclosed twice with different identifying terms. Either the claims should be amended to clearly describe the structural elements of the portable device, or Applicant should clarify the differences between the "bioindex detecting means . . . at a rear facing portion" and the "detecting portion" on the rear facing portion of the body.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 8 – 16, 19 – 27, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engstrom U.S. Patent No. 6,549,756 in view of Mault et al. U.S. PGPub No. 2003/0208113, further in view of Arai et al. U.S. Patent No. 4,332,258.

Note to Applicant: See previous action for rejection to unaddressed dependent claims, as they are rejected on substantially the same basis.

Engstrom discloses a portable electronics input device for controlling electronic equipment, comprising:

a body having an interior portion containing electronics that are configured to perform a wireless communication including at least one of a mobile telephone communication and television remote controller communication (Engstrom column 2 lines 51 – 66 personal digital assistant (PDA) with mobile telephone capabilities); and

bioindex detecting means for detecting a pulse wave, the front facing portion including a display screen, (Engstrom column 2 lines 51 – 67, column 3 lines 1 – 16, column 4 lines 7 – 19, figure 2 PDA contains numerous sensors along the sides of the device casing for measuring blood flow rates processed into heart rate data. PDA has a display 202 on the front);

said casing of said body including a first sensor on a first side of said body and a second sensor on a second side of said body, said first sensor and said second sensor positioned to be in contact with a hand during the wireless communication (Engstrom column 2 lines 51 – 67, column 3 lines 1 – 16, column 4 lines 7 – 19, figure 2 PDA contains numerous sensors along the sides of the device casing).

Engstrom discloses a personal digital assistant with embedded sensors. Engstrom fails to explicitly teach using the personal digital assistant for controlling of any one of electronic equipments including personal computer, television image receiver, video and/or audio signal recording and/or reproducing device and air conditioner. However, Mault et al. a reference in an analogous art of physiological monitoring disclose a personal digital assistant used for collecting physiological data that communicates with a home computer, television, or entertainment device via wireless communication (Mault et al. paragraph 0078). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the uses of a personal digital assistant as taught by Mault et al. to the device of Engstrom, since the structure and capabilities of personal digital assistants are equivalent.

Furthermore, Engstrom and Mault et al. fail to disclose a pulse wave sensor with a finger holding cover disposed on the rear facing portion of the personal digital assistant. Regarding the placement of sensors on the personal digital assistant, it would have been obvious to one of ordinary skill in the art at the time the invention was made to place sensors on the rear face of the device, since Engstrom states that sensors may be distributed on a number of locations to collect physiological data using combinations of sensors depending on how the user holds the device (Engstrom column 3 lines 7 – 16). Also, Applicant has not provided any reasoning showing the advantage realized or necessity of the pulse wave sensor with finger cover being placed on the rear cover as opposed to other locations on the device. Therefore, the placement of the pulse wave sensor with cover is considered a design choice.

Regarding the pulse wave sensor finger cover, Arai et al. disclose a portable pulse meter comprising a pulse wave sensor disposed on a portable device, with a curved finger cover (Arai et al. figure 1, column 2 lines 51 – 55). It would have been obvious to one of ordinary skill in

the art at the time of the invention to modify the invention of Engstrom and Mault et al. with the pulse wave sensor with finger cover of Arai et al., since Engstrom teaches that any sensor capable of generating data of blood flow rate can be used (Engstrom column 5 lines 3 – 17), and the finger cover blocks external light from interfering with the photosensitive sensor (Arai et al. column 2 lines 51 – 55).

Independent claims 20 and 26 are rejected on substantially the same basis as claim 1.

42. The input device according to claim 1, further comprising:

Bioindex analyzing means for analyzing bioindex information detected by the bioindex detecing means (Engstrom column 3 lines 7 – 67, column 4 lines 1 – 34 circuitry and programming in the PDA processes and analyzes collected data to derive physiological parameters); and

Selection means for selecting bioindex information from the bioindex information detected by the bioindex means, the bioindex means analyzing bioindex information selected by the selection means (Engstrom column 3 lines 7 – 67, column 4 lines 1 – 34 the PDA infers holding patterns and selects sensors to be used, thus selecting a subset of total data collected, for processing and analyzing).

Claims 3, 5, 6, 28 – 31, and 33 – 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engstrom U.S. Patent No. 6,549,756 in view of Mault et al. U.S. PGPub No. 2003/0208113, further in view of Arai et al. U.S. Patent No. 4,332,258 as applied to

claims 1, 2, 8 – 16, and 19 – 27 above, and further in view of Yollin U.S. Patent No. 5,990,866.

Note to Applicant: See previous action for rejection to unaddressed dependent claims, as they are rejected on substantially the same basis.

In regard to claims 3, 5, 28, and 35, Engstrom, Mault et al., and Arai et al. disclose detecting heart rate from a plurality of sensors disposed on a mobile device (Engstrom column 2 lines 51 – 67, column 3 lines 1 – 16), yet fail do disclose measuring temperature or galvanic skin response. However, Yollin a reference in an analogous art of collecting physiological data, discloses collecting physiological data via at least GSR, heart rate, and temperature sensors (Yollin column 4 lines 2 – 22). It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the heart rate sensors of Engstrom, Mault et al., and Arai et al. with the GSR or temperature sensors of Yollin, since Yollin discloses that it is known in the art of physiological monitoring to use any number of alternative sensors depending on the breadth and complexity of the physiological information sought (Yollin column 4 lines 2 – 22).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: **Goodman U.S. Patent No. 6,616,613 B1**.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kai Rajan whose telephone number is (571)272-3077. The examiner can normally be reached on Monday - Friday 9:00AM to 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Johnson can be reached on 571-272-4768. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kai Rajan/
Examiner, Art Unit 3769

/Henry M. Johnson, III/
Supervisory Patent Examiner, Art Unit 3769

May 24, 2010